SHILAP Revista de Lepidopterología
ISSN: 0300-5267
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Sociedad Hispano-Luso-Americana de Lepidopterología
España

Heckford, R. J.
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SHILAP Revista de Lepidopterología, vol. 40, núm. 160, diciembre, 2012, pp. 465-468
Sociedad Hispano-Luso-Americana de Lepidopterología
Madrid, España

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SHILAP Revta. lepid., 40 (160), diciembre 2012: 465-468 CODEN: SRLPEF ISSN:0300-5267

A further record of *Phereoeca lodli* Vives, 2001, from Spain, with illustrations of the adult and female genitalia (Lepidoptera: Tineidae)

R. J. Heckford

Abstract

This paper records *Phereoeca lodli* Vives, 2001, from a second Spanish province, which appears to be only the fifth Spanish locality, illustrates the adults of both sexes and the female genitalia, and gives some information on the biology, which is poorly known in the genus.
KEY WORDS: Lepidoptera, Tineidae, *Phereoeca lodli*, adults, larva, Spain.

Una nueva cita de *Phereoeca lodli* Vives, 2001 de España, con ilustraciones del adulto y la genitalia femenina (Lepidoptera: Tineidae)

Resumen

Este trabajo registra, por segunda vez, *Phereoeca lodli* Vives, 2001 para una provincia española, que parece ser sólo la quinta localidad española, ilustrándose los adultos de ambos sexos y la genitalia femenina y da una pequeña información de su biología, de este género escasamente conocido.
PALABRAS CLAVE: Lepidoptera, Tineidae, *Phereoeca lodli*, adultos, oruga, España.

Introduction

The genus *Phereoeca* Hinton & Bradley, 1956, occurs throughout the wet tropics of both the Old and New World (ROBINSON & NIELSEN, 1993). It is a small genus of which there are no more than five described species worldwide (ROBINSON, 2009). Until 2001 the only species known from the Palaearctic region was *P. allutella* (Rebel, 1892), recorded from only the Canary Islands and Madeira.

The larvae of the genus construct characteristic flattened, broadly spindle shaped cases which are often common on house walls in many parts of the tropics, but it is unclear what is their natural habitat.

ROBINSON & NIELSEN (1993) state that the larval food is uncertain, but they refer to various publications, the earliest being in 1914, recording larvae feeding on the remains of dead insects in spiders' webs. They comment that a consensus is emerging that the larvae feed on chitin in the form of dry insect remains. My observations bear this out.

Phereoeca lodli was described as a new species, and a genus new to Europe, by VIVES MORENO (2001) from 10 specimens collected between 4-XI-1995 and 18-VIII-1999, at two localities, Huelva and Punta Umbría, Huelva province, Spain, by Mr. M. Huertas. Subsequently he

found the species at two other areas near Huelva (HUERTAS DIONISIO, 2005). I am not aware of any subsequent European record.

VIVES MORENO (2001) describes the adult and genitalia of both sexes, with figures of the genitalia, but does not illustrate the adult or larval case, nor describe the larva. HUERTAS DIONISIO (2005) gives a detailed description of the larva and larval case, with figures.

Account of the early stages

On 19-X-2001, whilst on a short family holiday, I found several Tineid cases in Sevilla, Sevilla province, Spain, which is about 85 km east of Huelva. All the cases were within the grounds of the Reales Alcázares, a mainly 14th century palace. Most were on walls that had been coated with a matt white or ochre paint and were exposed to the elements, except one which was part of a tunnel. A few cases were on an unpainted old stone and sandstone wall that did not form part of a building. Those on the painted walls were up to two metres above the ground, often in corners, where there was no lichen, moss or debris or any obvious pabulum anywhere near. Those on the stone and sandstone wall were low down and near spiders' webs.

I did not know what the larvae might eat, but because some were near spiders' webs dead insects seemed a possibility. The larvae were offered some dead Tipulidae, Microlepidoptera and *Calliphora vomitoria* (Linnaeus, 1758) (Diptera). They readily ate the abdomens, but no other parts, of the Tipulidae and Microlepidoptera but did not eat any part of the *Calliphora vomitoria*. I kept all the larvae together and there was no sign that they tried to eat the cases, or contents, of other individuals.

Three moths, two males and one female (Figs. 1-2), emerged between 4 and 22-XI-2001.

Determination of the identity

Dissection of one of the males showed that the genitalia appeared to agree with figures 5 and 5a of *Phereoeca lodli* in VIVES MORENO (2001). Dissection of the female (Fig. 3), however, showed that the eighth sternite differed from figures 8 and 8a in that paper in being medially emarginate posteriorly and thus agreeing with the generic description of *Phereoeca* by ROBINSON & NIELSEN (1993) and shown in the photograph of the female genitalia of *P. praecox* Gozmány & Vári, 1973, in ROBINSON & NIELSEN (1993). Comparison with a genitalia preparation of a male *Phereoeca allutella* made by Dr R. Gaedike showed that it was not that species, probably the most widespread of the genus, and discussions with Dr G. S. Robinson concluded that my specimens were indeed *P. lodli*.

This was confirmed by examination of male and female paratypes of *P. lodli* and genitalia slides made from these that Dr. A. Vives very kindly sent me on loan.

VIVES MORENO (2001) gives differences between the genitalia of *P. lodli* and *P. praecox*. Although, as mentioned above, in discussion with Dr G. S. Robinson he considered that my specimens were *P. lodli,* later ROBINSON (2009) states that *P. lodli* and *P. praecox* may be conspecific. *P. praecox* is known from West Africa, Australia, Jamaica and Brazil. It is not the purpose of this paper to consider whether or not Robinson is correct, but simply to provide more information about the biology of *P. lodli* and illustrate both sexes of the adult and the female genitalia, as set out above.

Acknowledgements

I am very grateful to Dr R. Gaedike, Bonn, Germany, for lending me his genitalia slide of *Phereoeca allutella*, Dr A. Vives, Madrid, Spain, for lending me paratypes of adults and genitalia slides of both sexes of *P. lodli* and larval cases as well as translating the Abstract of this paper into

Spanish, the late Dr G. S. Robinson, the Natural History Museum (BMNH), London, for helpful discussions and Mr B. Goodey, England, for photographing the genitalia slide.

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(Recibido para publicación / *Received for publication* 15-XI-2011)
(Revisado y aceptado / *Revised and accepted* 12-II-2012)
(Publicado / *Published* 30-XII-2012)

Figs. 1-3.– 1. *Phereoeca lodli* Vives, 2001, adult, male. **2.** *Phereoeca lodli* Vives, 2001, adult, female. **3.** *Phereoeca lodli* Vives, 2001, female genitalia.